82d Congress
1st Session

COMMITTEE PRINT NO. 1

NEW ENGLAND FUEL SUPPLIES

STAFF REPORT

TO THE

SUBCOMMITTEE ON FUEL

OF THE

SELECT COMMITTEE ON SMALL BUSINESS
UNITED STATES SENATE

DECEMBER 5, 1951

Printed for the use of the Select Committee on Small Business

UNITED STATES
GOVERNMENT PRINTING OFFICE
92213 WASHINGTON : 1951

DOCUMENTS EXPEDITING PROJECT

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(Created pursuant to S. Res. 58, 81st Cong.)

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NEW ENGLAND FUEL SUPPLIES

Last year, pursuant to Senate Resolution 344, the Select Committee on Small Business conducted an investigation to determine whether fuel supplies for New England would be adequate during the winter season of 1950–51 and to ascertain what steps might be necessary to prevent possible shortages from developing in that area. Timely action by the suppliers in building up their stocks for peak requirements, as had been urged in the committee's report,[1] and the relative mildness of the last winter season in New England combined to remove the threat of prospective shortages which had been feared.

Again this year, with the approach of cold weather, the committee has received expressions of concern regarding the New England fuel supply, particularly as related to possible repercussions from the shutdown of Iranian oil operations and threatened disruptive effects of existing ceiling prices on heating oils as fixed by the Office of Price Stabilization. Consequently, at the request of Senator William Benton, the staff of the committee undertook an investigation of these and other aspects of present conditions as to their bearing upon the availability of adequate fuel supplies for New England this winter.

SUMMARY

Our inquiries have indicated that the suppliers and distributors of fuel in New England, although aware of and alert to existing problems and uncertainties which could adversely affect the situation, are generally of the opinion that requirements can be met if such steps as are necessary and practicable to assure a continuing flow of supplies are made effective soon. Except, perhaps, in the event of extremely severe and prolonged cold weather during the next 4 months, it appears that conditions are basically favorable to adequate supplies and that such measures as might prove to be needed are not outside the bounds of feasibility if adjustments are not too long delayed.

At the present time the most favorable aspect of the supply situation is that stocks of heating oils have reached an all-time high level this fall in the New England and Middle Atlantic areas, as special efforts were made by the suppliers this summer and autumn to advance lift to a greater extent than previously the anticipated requirements of the winter season. Because of their location near points of consumption, these high-level stocks represent not only the storing up of the products but of their transportation from refining centers along the Gulf coast as well. There is still a need, however, for the development of greater terminal storage capacity for heating oils in the New England area, so that a greater part of the total winter requirements can be brought in during the off season.

[1] The New England Fuel Situation and Prospects. Report of the Senate Select Committee on Small Business, pursuant to S. Res. 344, S. Rept. No. 2633, 81st Cong., 2d sess., December 14, 1950. Earlier, on October 21, 1950, a preliminary staff report had been issued as Committee Print No. 1.

As always, the unpredictability of winter weather is the primary element of uncertainty in considering fuel supply and requirements for heating. There is obviously a substantial and critical difference between such requirements if temperatures over the winter season are considerably above normal, as they were in New England for the past 2 years, and when they are normal or below normal, as they could be this year. Under the latter conditions, apparently safe working margins can quickly disappear. Suppliers of heating fuels generally make their advance estimates and plans in terms of normal weather expectations.

The suppliers of heating oils to the east coast, including New England, are chiefly concerned at this time with the effect of existing OPS price regulations as a factor which threatens to retard the bringing in of adequate supplies to meet this winter's requirements. This problem, which the Office of Price Stabilization now has under consideration, arises because prices for heating oils at the refineries and at terminal destinations, such as New York, Boston, and Providence, are fixed, but tanker transportation rates are not. Although these tanker rates have been increasing sharply in recent weeks and may go higher, in accordance with seasonal fluctuations experienced in the past, it is not regarded as practicable to subject them to price controls because it is anticipated that such action would only divert charter tankers from the coastwise service into more remunerative channels elsewhere in the world. Squeezed by reduced margins as charter rates for tankers have risen, suppliers are reluctant to engage them unless a compensating upward adjustment in the price of heating oil is permitted. Individual suppliers apparently tend to hold off, hoping that others will take on the burden of providing the high-cost part of the supply which involves the payment of hired tanker rates. Under these circumstances, it has been urged that a critical part of the heating-oil supply for the east coast may be jeopardized unless incentives are at least partially restored by price adjustments in the consuming markets. It has been estimated that approximately 6 percent of the total annual supply of east coast heating oil is involved in this tanker situation, or upward of 15 percent when measured against requirements of the critical January–March period. Especially if there were to be a severe winter this year in New England, the supplies which require the employment of tankers under charter could be vital to the avoidance of fuel shortages and cold homes.

Supplies of heavy residual fuel oil available for industrial use in the east-coast area are running somewhat below a year ago, owing to the diversion of substantial quantities previously imported from Venezuela and the Caribbean area to other world markets affected by the stoppage in Iran. However, compensating downward adjustments of consumption have also been made, especially by electric-generating plants which are equipped to use coal as an alternative fuel and by those stations in the Middle Atlantic area which have recently been attached to natural-gas pipelines from the Southwest. As a result of these shifts, electric-utility stocks of fuel oil in the New England and Middle Atlantic areas on October 1 this year were 21 percent and 27 percent greater, respectively, than they were on the corresponding date one year earlier. Moreover, imports of residual fuel oil have been increasing in recent weeks, and this seasonal trend is expected to be maintained through the first quarter of 1952.

The situation as to coal supplies, both bituminous and anthracite, appears to be satisfactory in most respects at this time. Stocks of bituminous coal are comfortably large, and there has been no difficulty in keeping production abreast of rising industrial consumption and expanding exports. Until recent weeks, however, domestic consumers of anthracite had been very slow to lay in their winter requirements, and dealer inventories are not in strong condition either. In the event of a severe winter, there may be local shortages and many consumers may be unable to obtain the sizes they prefer if these conditions are not improved without delay. In New England, conversions from solid fuel to oil have been fewer than they were last year; in fact, this trend has been reversed with respect to many large consumers of bituminous coal. There is at present no slack in the supply of railroad coal cars; and, while the situation at present is not alarming, a period of prolonged severe weather would probably result in extremely tight conditions which might require emergency controls over the available supply of hopper cars. There may also be tightness in coal-carrying ships, since some domestic collieries have been diverted into foreign channels to accommodate the continuing large exports of coal to Europe. Solid-fuel operators in New England express confidence that such actions as might become necessary to avert shortages can and will be made effective, even though the required steps involve them in some high-cost operations. They also are particularly watchful of changing conditions as to oil supplies, such as would give rise to shifting industrial requirements to solid fuel.

In view of the many sensitive influences which in these times have a bearing upon the adequacy of fuel supplies, it is difficult to foresee with complete assurance just what the conditions may be even 6 months ahead. It may be well to note, therefore, that the statements and indications given in this report with particular reference to New England are based upon the following assumptions, except where otherwise stated:

1. That weather conditions will be normal.
2. That there will be no major interruptions of fuel production or transportation because of labor-management difficulties.
3. That, where shown to be necessary to prevent impairment of supplies, adjustments of the price structure relative to heating oils will be effected.
4. That Iranian production and refining will not be resumed in time to be a factor in providing oil supplies through the current winter season.
5. That the high level of industrial activity related to the defense economy of the United States will continue.
6. That through the present winter season there will be no new international developments to disrupt the present world situation as to petroleum.

Heating oil

Primary stocks.—Primary terminal stocks of the distillate fuel oils reached an all-time high level in the east and Gulf coast areas combined in the week ended November 10, 1951, climaxing an intensive effort to build up such inventories during the summer and autumn months. The light oils—chiefly No. 2—used for space heating account for about 60 percent of the total consumption of distillates,

which also include the Diesel fuels and some industrial grades. The importance of the heating oils to New England is indicated by the fact that nearly 60 percent of the total national consumption of distillate grades of heating oil is in the east coast area (district I). The six New England States alone account for more than one-fourth of the total consumption in district I, and the Mid-Atlantic States for nearly two-thirds.[2]

New England heating-oil requirements are supplied by refineries in both districts I and III, the latter being the Gulf coast area. Since a most intensive build-up of distillate terminal stocks this year has occurred in the east coast area of heavy consumption, their favorable location in effect represents a desirable storing up of transportation requirements as well as of products ahead of winter peak demands in this area. Reported terminal stocks of distillates in districts I and III for recent weeks as compared with the corresponding totals last year are shown below.[3] With the arrival of colder weather, these stocks started their usual seasonal decline in the latter part of November.

Primary terminal stocks of distillates

[Thousands of barrels]

Date	District I		District III		Districts I and III	
	1951	1950	1951	1950	1951	1950
Sept. 22	33, 227	23, 002	18, 566	17, 215	51, 793	40, 217
Oct. 27	36, 630	27, 294	20, 639	18, 816	57, 369	46, 110
Nov. 3	36, 813	28, 498	21, 141	20, 117	57, 954	48, 615
Nov. 10	36, 634	29, 068	22, 151	19, 518	58, 785	48, 586
Nov. 17	36, 118	29, 816	21, 726	19, 739	57, 844	49, 555
Nov. 24	35, 200	29, 725	21, 911	19, 663	57, 111	49, 388

Whereas terminal stocks in district I were at or very near the practical limits of capacity by mid-November this year, it is estimated that storage facilities in the Gulf coast region (district III) had room for approximately 6 million additional barrels if such capacity were needed to accommodate temporary surpluses from refinery runs and yields of heating oils in that area. At the peak on November 3 this year primary storage of distillates in district I was nearly 30 percent greater than on the corresponding date in 1950 and also was 23 percent above the highest level reached last year. For district III, on the other hand, the high point this year, on November 10, was only 13 percent above the corresponding date last year. Considering the unprecedented level of east coast distillate stocks attained this year, it appears that there has been a substantial amount of reclamation of idle tankage and conversion of bulk facilities from the storage of other oil products, as well as the construction of some additional new tankage for heating oils. Inasmuch as both the east coast and the Midwest areas draw heating oil supplies in large volumes from the Gulf coast refineries (district III), it is significant that primary stocks of distillates in the midwestern area (district II) also are at a high level this year as the current winter season begins. On November 17, such stocks were approximately 35 percent greater than a year ago.

[2] U. S. Department of the Interior, Bureau of Mines, Peak Sales of Fuel Oil and Kerosene in 1950, Mineral Market Report No. MMS 2003, October 3, 1951.

[3] Weekly statistical reports of the American Petroleum Institute.

Secondary storage.—Because comprehensive reports are not collected systematically on the amount of heating oil contained in secondary storage, i. e., in the tanks of local distributors and consumers, estimates tend to vary as to the current level of such inventories. One experienced observer who endeavors to keep a check on this matter concludes that the total volume of secondary dealer storage in the east coast area on September 1 this year was substantially below the level of a year earlier (perhaps by as much as 2,000,000 barrels) and that consumers likewise have lagged in filling their tanks during the summer and autumn. Another industry source, however, which has initiated a project for developing a regular reporting system on secondary storage of heating oil, in taking direct issue with this conclusion, estimates on the basis of certain collected data and localized advices that the level of secondary storage on July 1 over the country as a whole was about 10,000,000 barrels greater than 1 year earlier and has increased further since that time. The suggestion is made, also, that the total consumer and dealer carry-over resulting from mild weather conditions in New England toward the end of last year's heating season may have been greater than usual.

It is further estimated by this latter source that total secondary stocks of heating oil in July this year amounted to between 20 and 25 million barrels in the east coast area, or to more than one-third the combined aggregate of primary and secondary storage stocks on hand going into the present heating season. In view of the importance of these secondary stocks as a factor affecting the probable adequacy of heating oil supplies for winter requirements, it seems highly desirable that efforts be directed either by the industry or the Government to the development of a reliable basis for periodically determining within reasonably close limits the volume of heating oil available in secondary storage. Unless significant changes in this respect are made known, reported data regarding primary terminal stocks alone—although accurate in themselves—may be misleading as an indication of the total inventory situation.

Demand estimates.—In estimating heating oil demands for the current heating season, as compared with last year, consideration must be given primarily to the factor of market growth and to the contingencies of weather. Under circumstances now prevailing, another factor, namely, exports to countries which have lost their usual supplies from Iran, has given rise to some concern. Although such exports of the middle distillates, including quantities of No. 2 heating oil, have increased sharply in recent months as compared with comparable prior periods, the volumes involved are small relative to total domestic production.[4] Existing governmental machinery to curtail such exports, which have occurred largely as distress sales of surplus stocks during the off-heating summer and autumn months, can be invoked if domestic demands require such action to be taken. Military requirements for petroleum products are not expected to increase substantially during the winter months, assuming no change in international conditions.

[4] Approximately 4 percent in the first 9 months of 1951. Such exports in the 9 months of 1951 through September were 81 percent greater than in the corresponding period of 1950. U. S. Department of the Interior, Bureau of Mines, Monthly Petroleum Statement No. 344, September 1951.

With respect to demand growth, installations of new oil burners this year have been about 18 percent below the very high volume attained in 1950. This drop is attributed not only to curtailments of materials but more particularly to shortages of available manpower for installing burners. Nevertheless, it is expected that, over the Nation as a whole, the total number of heating oil consumers will be 10 to 11 percent greater this winter than last year. As yet, the introduction of natural gas into New England has not become a large factor in the domestic heating market of that area, although it is expected to be of growing importance.

Considering these factors and also assuming normal weather patterns, the Petroleum Administration for Defense has estimated that total United States requirements for distillates, including heating oil, in the 6-month heating season this year will be about 12.4 percent above the corresponding demands of last year. Owing to abnormally mild weather conditions in the 1950–51 winter season along the North Atlantic seaboard, the comparative increase of heating-oil requirements for New England this year may be somewhat greater than for the country as a whole. On the assumption of normal weather, working estimates by suppliers who are directly concerned with the New England market indicate increased requirements ranging from 13 to 20 percent over last winter.

Production and refining.—The outlook for the present winter with respect to crude production and refining appears to be satisfactory at this time. Earlier apprehensions that the shut-down of Iranian operations would result in shortage conditions have now been overcome, except for certain products such as aviation gasoline and bunker fuel for ships in certain quarters of the world. In other respects, the Iranian loss of 610,000 barrels daily of crude and refined products has been made up by increased crude output chiefly in other parts of the Middle East and by stepped-up refinery operations in Europe, the United States, and at various other refining centers. Looking beyond the present winter, however, a long continued delay in resuming operations in Iran would require increasingly intensive developments elsewhere if growing world petroleum requirements are to be satisfied.

At present, crude stocks in the United States are in a strong position at 262 million barrels, or 18 million barrels more than a year ago. In view of these conditions, production cut-backs have recently been effected in Texas and Louisiana by the conservation authorities of those States.

While refining facilities are being operated not far from capacity, heating oil supplies can be increased as necessary by upward adjustments of refinery yields to meet peak requirements. If the estimated demands of this heating season are to be met, yields of heating oils apparently will have to be raised somewhat higher than last year in order to avoid an undue depletion of stocks and a threat of shortages toward the end of the winter period. The practicability of such adjustments is increased now by the fact that stocks of gasoline are not short. Some of the refining companies continue to be reluctant to make this kind of adjustment, however, because of long-standing price differentials between heating oil and gasoline which make it more profitable to produce gasoline. They do not regard themselves as being in the heating oil business except to the limited extent that its production is virtually unavoidable in the refining process. Conse

quently, most of this responsibility is left to a few of the major companies who, recognizing the consequences to the public, the industry, and themselves of a heating oil shortage, seasonally raise their yields of heating oils substantially above the general average of the refining industry as a whole. To repeat what was said in our report last year with reference to this matter:

> It is * * * important that all of the refineries, wherever technically possible, do their share in this regard rather than leaving the entire responsibility to others.

Tankers and rates.—As in the peak periods of other recent years, oceangoing tankers are now fully engaged and are expected to remain so through the winter months. Charter rates for tankers, as to which specific ceiling prices have not been fixed, also have risen in response to the prevailing tight demand-supply conditions. It has not been regarded as feasible to control these rates for domestic tanker hauls, because it is anticipated that such action would divert into other more remunerative world channels a critical number of ships needed to assure adequate petroleum supplies to the east coast.

Some recent charters for transporting spot cargoes have been made at rates more than double the "standard" Maritime Commission rates which were established in 1942 and maintained during the war period. The tanker operators point out that these standard rates have no relevance to existing conditions of inflated costs which have affected them as well as the economy generally. Thus, over the past year tanker rates have averaged slightly more than 80 percent over the maritime standard, which continues to be cited in the trade as a convenient method of expressing price comparisons and trends. Contracts for tankers chartered over long periods usually bear somewhat lower rates than those for single trips or short periods; and, of course, to the extent that suppliers own and operate their own tankers they are not affected by charter rates. Nearly all of the integrated oil companies, however, as well as the independent bulk terminal operators and cargo buyers, find it necessary to engage chartered tankers for some part of their transportation requirements.

Over the past several years tanker rates have fluctuated greatly, from summer lows to winter highs, in response to changing transportation demands. From the standpoint of assuring adequate fuel supplies, with which this report is concerned, the most significant aspect of this situation is that in periods of peak requirements suppliers dependent upon chartered tankers for filling out their transportation needs may shy away from paying high rates which cut deeply into the profitability of their operations, thus tending to create shortages and dislocations during the critical peak season in the consuming markets affected. In basic terms, this problem of recurring tanker stringencies could be relieved by the provision of enough additional tankers to fully cover peak demands for them, or by their more balanced employment throughout the year. The first course would result in a surplusage of tankers during the off-peak summer periods, while the second will require additional destination storage facilities to be built so that a larger part of the winter heating requirements can be shipped in the off-heating season.

Heating oil price structure.—These conditions as to tanker rates have given rise to a price problem which may affect the adequacy

of heating oil supplies for New England this winter, especially if severe weather should boost requirements. Existing OPS ceiling prices on heating oils were fixed at such levels that the differential between prices at the Gulf refineries and at points of destination along the North Atlantic seaboard amounted, after allowing for terminal costs of handling, shrinkage, and insurance, to a remaining spread for transportation equal to about 35 percent less than the maritime standard rates. With charter tanker rates now much higher than this, the suppliers are confronted with a squeeze between fixed prices on heating oils and unrestricted competitive prices for chartered tanker service.

The independent terminal operators urge that they cannot afford to bring in their needed winter supplies under these conditions and that an adjustment in the destination ceiling price on heating oils is required, since it does not seem practicable to restore their margins by fixing tanker rates or by rolling back existing ceiling prices at the Gulf refineries. If, on the other hand, the major integrated companies assume the burden of engaging the necessary chartered tankers, the net result to them would represent either an absorption of transportation losses on such cargoes or the receipt of substantially less than ceiling prices for their product at the refineries. Although the independent operators contend that the integrated companies are better able to absorb such losses in their total operations, they also point out that if the major companies take on this burden, the status of the independents will be jeopardized because consumers may decide that their supplies will be better assured if they are served henceforth by the distribution outlets of a major integrated company. It is further suggested, as another aspect of the problem that, under the existing OPS price structure as related to tanker rates, the refining companies if required to absorb such transportation losses would be deprived of an adequate economic incentive to maximize their refinery yields of heating oils, or that operators in the Gulf area would be encouraged unduly to sell their heating oil at the going ceiling price of 8 cents into more remunerative foreign markets.

To correct this situation, both groups of suppliers, majors and independents alike, agree that there is need for increasing the delivered price of heating oil in the North Atlantic seaboard area by one-half cent a gallon or more. They further support this conclusion by pointing out that the OPS price structure was out of adjustment by this amount at the time when ceiling prices were first established. In effect, they say, the market structure has been frozen with a summer price under winter conditions. While a price adjustment of the amount noted above would not fully cover the additional costs of chartered transportation at present tanker rates, some of the suppliers apparently feel that a one-half cent increase would at least substantially relieve the situation and enable them to "average out" better on their total supplies, including those brought in earlier and those not requiring transportation in chartered tankers. They are not unmindful, also, of the harm to their established businesses and customer good will which would result from a failure or inability to provide adequate supplies.

The independent operators also suggest that the major companies will be in a better position to help them out in filling their requirements if a reasonable price increase is allowed at this time. For this

reason, among others, the independents are opposed to a differential type of adjustment permitting them, but not the major companies, to increase their delivered prices. They insist that a two-price scheme would not work because the majors would be denied the incentive to aid the independents in bringing in the supplies which they need and also because a dual price structure would antagonize the customers of the independent suppliers.

No less firm opposition is expressed to the extension of Government subsidies to those suppliers who may suffer losses on heating oil transported at high cost in chartered tankers, as an alternative to a general adjustment of the price structure. Among the reasons for regarding such a subsidy device as impracticable, suppliers cite the problem of determining who should be subsidized and how much, the difficulties of providing effective administrative machinery for such a program, and the probability that subsidy outlays would increase progressively as suppliers grew indifferent to rising tanker rates whose burden could be shifted to the Public Treasury.

Thus, as the suppliers see it, the issue now is whether to grant a relatively small price increase, as a matter of both equity and "supply insurance," or to gamble with the possibility of insufficient and tardy supplies in some market situations if the winter season turns out to be severe. The Office of Price Stabilization has had this matter under consideration for some time, and recently has sought the assistance on a geographical basis of industry advisory subcommittees for the further examination of particular localized conditions.

Additional terminal storage needed.—New England will not be entirely relieved from recurring anxiety each year regarding the adequacy of its heating oil supplies in relation to inherently uncertain weather conditions until more terminal facilities for the storage of heating oils have been provided in that area. Not so many years ago heating oil was a comparatively incidental byproduct of the refining industry and its distribution into channels of consumption, during what was then the off-peak winter season for the total flow of petroleum products, presented no serious problem of congestion. Now, however, the seasonal unbalance, fed by much larger volumes of heating oil, has swung the other way and the annual peaks of total petroleum requirements occur in the winter. These characteristics of the present market have put severe seasonal strains upon both refining and transportation facilities. What appears to be a winter tightness of the tanker supply in reality reflects instead a deficiency of heating-oil storage capacity, which necessitates the movement of too large a part of the total requirements during the burning season.

To an increasing extent the suppliers of heating oil in New England and the Middle Atlantic States are coming to recognize the nature of this problem and its solution. Some of them, but not all, have enlarged substantially their storage facilities since the end of World War II, including a number of important installations completed during the past year by independents and major companies in New England and at New York tidewater terminal points. Meanwhile, however, the aggregate size of the market requiring storage protection also has grown tremendously.

Certain of the major suppliers have vigorously pressed for storage-expansion programs, both in their own company operations and in urging similar action upon the wholesale cargo buyers who are their

customers. They have also endeavored to stimulate the development of additional storage capacity by requiring these outlets to make arrangements for taking a substantial part, ranging up to 40 percent or more, of their total annual requirements during the off-heating season. While these efforts have met with some success and the objective is a necessary one, it is important to recognize also that unduly strict adherence by the major companies to a rigid quota basis restricting winter-time deliveries to buyers not yet provided with storage facilities sufficient to make this system work effectively could result in local shortages in the consuming markets served by such operators. It is indicated, however, that the major companies sponsoring such developments are aware of the necessity for a gradual and reasonably flexible approach. Ultimately, it is intended that more than half of the total heating oil requirements of the New England and Middle Atlantic areas can be accumulated in advance of the heating season.

Many of the cargo buyers and large regional distributors, accustomed in the past to providing only enough storage to meet their needs until "the next ship comes in," are still reluctant to extend their terminal storage operations on the basis of an enlarged seasonal scope. In thus holding back, these distributors evidently are concerned as to the substantial capital investment required for acquiring sites and building tankage, the costs of carrying inventories over fairly long periods, and also the risk that adverse price changes might result in substantial losses on such accumulations. For these reasons, it may not be possible for smaller secondary distributors with limited financial resources to go very far in the direction indicated.

But for the large primary operators there are likely to be real advantages in being in a position to take a large part of the seasonal swings, not only in more surely protecting their businesses and their customers with adequate supplies, but in taking advantage also of favorable buying opportunities and in benefiting from improved relationships with their refinery suppliers. In addition, it may be necessary to provide more specific price incentives to terminal operators than now exist. The performance of the seasonal storage function on a substantial scale is, after all, a legitimate cost element which could justifiably be recognized in terms of price. In fact, some cargo buyers may seriously question the economic advantage to them of becoming terminal operators if in either case they would generally pay the same price for the product they buy. While a two-price structure on concurrent sales would probably be objectionable, as well as unnecessary, perhaps what is needed is a more definite differentiation between heating oil prices in the off-peak summer period and in the winter heating season.

Steel shortage.—As in many other segments of the national economy over the past year, the development of additional storage tank facilities has been hampered by difficulties in obtaining commitments for required steel supplies. Consequently, over the United States as a whole, additional petroleum-storage capacity of all types built this year is now expected to fall considerably short of the restricted target of 40,000,000 barrels which had been set. Officials in the Petroleum Administration for Defense who are concerned with this matter are hopeful that conditions may become somewhat better in this respect by the middle of 1952.

The nature of this problem, with particular reference to New England, may be illustrated by conditions affecting the proposed construction of a large new tidewater terminal at New Haven for the storage of 1,500,000 barrels of petroleum products, chiefly heating oil. This project has been under way for several years; the harbor channel has been deepened and the docks built to accommodate large ocean-going tankers. But since no tankage has as yet been erected and additional connecting pipelines also are required, this partly developed primary terminal facility is dormant. On November 28, 1951, however, steel was allocated for the scheduled completion of this project before the winter of 1952–53. Up to now, Connecticut has had no tidewater terminal of its own and has, therefore, been dependent upon barge transshipments from New York, Providence, and Boston.

To indicate more generally the magnitude of storage requirements, the largest supplier of petroleum products to this area estimates that, as a long-range proposition, it will need 24 million barrels of additional storage capacity in the east coast and Gulf areas in order to permit a maximum leveling out of refining and transportation operations, with most of this amount being required in consuming areas such as New England. The more immediate additional storage needs of this company, whose operations account for about 20 percent of the total volume of marketed petroleum products along the east coast, are estimated at 8,000,000 barrels before the winter of 1952–53.

Kerosene

New England also is a heavy user of kerosene for heating and other purposes, this area alone accounting for approximately 25 percent of the total consumption of this product in the United States. Kerosene appears to be well stocked in districts I and III as compared with last year at this time, when such inventories also were in good condition. Comparative figures on primary terminal stocks of kerosene for recent weeks and a year earlier are summarized below.

Primary terminal stocks of kerosene [1]

[Thousands of barrels]

Date	District I		District III		Districts I and III	
	1951	1950	1951	1950	1951	1950
Oct. 27	12,282	11,347	10,427	8,497	22,709	19,844
Nov. 3	12,452	11,960	10,254	8,351	22,706	20,311
Nov. 10	12,194	12,004	10,369	8,046	22,573	20,050
Nov. 17	12,152	11,490	10,447	8,050	22,599	19,540
Nov. 24	11,684	11,544	10,058	7,876	21,742	19,420

[1] American Petroleum Institute.

Subject to the same weather influence, seasonal changes in the heating demand for kerosene in New England conform closely to those for distillate heating oils as previously discussed. There is a marked difference, however, with respect to the factor of market growth which, in the case of kerosene, is less pronounced. For the east and Gulf coast areas combined, assuming normal weather conditions, the estimated total demand for kerosene in the period including the last quarter of 1951 and the first quarter of 1952 is expected to be a little over 5-percent greater than for the corresponding period last winter.

Allowing for exports and inland shipments from these areas, the estimated comparative increase in total demand becomes approximately 11 percent.[5] These indicated requirements should be met without difficulty, both as a result of a higher scale of refinery operations compared with last year and because refinery yields of kerosene can be increased slightly if need be.

Residual fuel oil

The high level of consumption of residual fuel oil which had developed since World War II has been arrested in recent months, principally because of the more limited availability of this product. Residual grades of heavy fuel oil are used in large volume along the Atlantic seaboard (district I), which obtains its supplies from both domestic production and foreign sources. These imports have been somewhat reduced recently by diversions of output in the Caribbean area to markets previously supplied from Iranian production.

In 1950, the east coast (district I) accounted for approximately one-half of the total United States consumption of residual fuel oil, and New England alone for nearly 12 percent. Heavy grades of fuel oil are used chiefly in New England by electric utility generating stations, by manufacturing industries, and for the heating of commercial buildings. Other important categories of consumption include bunker fuel for ships and military uses. Although the military requirements for residual grades of fuel oil have been increasing with the defense program, they still amount to only 5 or 6 percent of the total United States consumption.[6]

There is considerable flexibility in the use of residual oil in that many of the large users are equipped to use either it or coal, depending upon relative availability and price advantage. It has been estimated that the fixed users of residual fuel oil—those who could not, without considerable expense and delay at least, shift to a different fuel—require about half of the total supply. Cut-backs which may be necessary must, therefore, be made from the other half.

Such a shift is manifest in the following reported figures showing substantially diminished consumption of residual fuel oil by electric utility plants of the New England area in the first 9 months of this year as compared with the unusually high levels which were attained last year:[7]

	1951	1950
	Barrels	*Barrels*
January	1,305,267	1,510,482
February	1,150,031	1,475,806
March	1,159,523	1,588,915
April	1,033,161	1,282,233
May	1,141,949	1,354,783
June	1,197,535	1,405,057
July	1,141,590	1,614,817
August	1,352,631	1,762,076
September	1,166,963	1,617,550
Total	10,648,650	13,611,719

[5] For the first 9 months of this year exports of kerosene from the United States were 270 percent above the amount for the corresponding period in 1950. However, such exports this year were slightly less than 5 percent of total domestic production of kerosene. U. S. Department of the Interior, Bureau of Mines, Monthly Petroleum Statement No. 344, September 1951.

[6] U. S. Department of the Interior, Bureau of Mines, Mineral Market Report No. MMS 2003, October 5, 1951.

[7] Federal Power Commission, Monthly Reports on Consumption of Fuel for Production of Electric Energy.

This reduction of residual oil consumption, amounting to 22 percent for the period shown, has occurred notwithstanding continued increases in the electrical output of these generating plants. Their consumption of coal has increased accordingly. The drop in fuel-oil consumption would perhaps have been even greater had it not been for the fact that in some instances very favorable fuel-oil price contracts made several years ago still have some time to run. Since these electric plants purchase their fuel requirements primarily on the basis of comparative price, it is significant also that recent contracts for coal have been made at prices attractive to the buyers, whereas oil prices have been firming upward. As noted subsequently, industrial supplies of coal in New England apparently will be adequate to meet demands through the winter period, although transportation conditions may present some difficulties.

Stocks of residual fuel oil have not been adversely affected by the reduced flow of supplies, which up to now has been entirely compensated for by adjustments of consumption. The New England electric utilities, for example, had on hand as of October 1 this year fuel-oil stocks which were 21 percent greater than on the corresponding date last year. These current stocks are equivalent to 45 days' supply at present rates of consumption, as compared with 27 days' supply on October 1 last year at the going consumption rate at that time.

Primary terminal stocks of residual oil also are somewhat greater now than they were a year ago, both for the United States as a whole and for districts I and III. These comparative inventories in thousands of barrels as of November 24, 1951, and 1 year earlier are as follows: [8]

	Nov. 24, 1951	Nov. 25, 1950
United States	47,591	45,566
Districts I and III	23,038	21,326

It is further indicated that residual fuel oil supplies and requirements will probably remain in a generally satisfactory working balance at least through the first quarter of 1952. For the 6-month period from October through next March it is estimated that the total available supply, including imports, for the east and Gulf coasts will be approximately 5 percent less than for the same period last winter. The total demand, including exports, for this same period also is estimated to be about 5 percent below the volume of last year.

Coal supplies [9]

Both nationally and in New England, the prospects for adequate coal supplies this winter are generally satisfactory, although there are some conditional factors to be kept in view with respect to both bituminous and anthracite. The possibility of prolonged severe weather which would stimulate fuel requirements and at the same time cause transportation difficulties is the principal contingency, assuming that coal production will continue without interruption through the winter.

[8] American Petroleum Institute.

[9] Except where otherwise noted, statistical data as to coal were furnished by the Defense Solid Fuels Administration in the U. S. Department of the Interior.

Bituminous coal.—Industrial demands for bituminous coal are expected to continue on an increasing scale in response to the heavy fuel requirements of the accelerating defense program. The earlier trend of conversions from coal to other fuels has slowed materially and in the case of many large consumers of fuel has been reversed. An outstanding example is the growing use of coal by the electric utilities of New England, whose consumption in the first 9 months of 1951 was nearly 50 percent greater than for the comparable period last year, while the consumption of residual fuel oil by these plants has declined substantially as already pointed out.[10] Shipments of coal, principally bituminous, to overseas destinations also have been increasing sharply, amounting to 25,841,615 gross tons in the first 10 months of this year as compared with only 1,475,155 tons in the corresponding 1950 period. Such exports to foreign countries other than Canada, which reached 4,013,078 gross tons in October, are expected to continue at a monthly rate of 3½ million tons or more well into next year.[11]

Bituminous coal mining has expanded to meet these requirements, as shown by the following comparative production totals for the United States as a whole:

	Tons
To Nov. 17, 1951	468, 309, 000
To Nov. 18, 1950	448, 909, 000

Stocks in the hands of consumers in the United States also have been well maintained, amounting at the end of September to 76,245,000 tons, or 66 days' supply at current rates of consumption. On the same date, the New England power utilities had coal inventories which were 24 percent greater than 1 year earlier and the stocks held by other large consumers of bituminous in New England also are reported to be in good shape at this time. Through November 10 this year movements of bituminous coal into New England by tidewater have been about 7 percent greater than last year, while all-rail movements have been somewhat smaller.

Tight conditions already existing in the supply of railroad open-top freight cars would be aggravated by severe weather or by a substantial further shift from other fuels to coal. Although there are nearly 40,000 new hopper cars[12] on order by the class I railroads, steel shortages continue to hamper the freight-car building program. Over the past year retirements of old hopper cars have been more than three times as great as new installations, with the result that on November 1, 1951, despite the fact that the unserviceable ratio has been reduced to less than 6 percent of total ownership, the number of serviceable hopper cars was 520,012 as compared with 516,244 at the same time last year.[13] In contrast, requirements for such cars have increased substantially, principally because of greater coal production and larger movements of iron ore. Consequently, the reported average daily shortage of hopper cars in October this year was 5,937, which compares with an average shortage of 8,106 cars daily in October 1950. The situation will be somewhat relieved during the winter months, however, with the seasonal curtailment of ore movements and road-building materials.[13]

[10] Federal Power Commission, Monthly Reports on Consumption of Fuel for Production of Electric Energy.
[11] Association of American Railroads, Car Service Division, The National Transportation Situation, November 20, 1951.
[12] The preferred kind for transporting coal. The alternative type of gondola car also is in short supply.
[13] Association of American Railroads, Car Service Division, The National Transportation Situation November 20, 1951.

Available coal-carrying ships also are in extraordinary demand, with some domestic collieries having been diverted into overseas operations to carry the currently large exports of coal. If total transportation demands of the tidewater coal trade increase further this winter, it may become necessary to press additional Liberty ships into emergency service.

In view of these conditions, suppliers of coal are watchful but not anxious. They express confidence that steps can and will be undertaken if necessary, such as controlled disposition of the available supply of railroad cars and emergency ship operations, to prevent shortages in their industrial and domestic markets for solid fuels.

Anthracite.—The domestic heating market for anthracite in New England continues its long decline, although it is reported that conversions to other fuels have lessened somewhat over the past year. In recent years New England has taken a little under 10 percent of the total output of Pennsylvania anthracite. With normal weather this year, requirements might be slightly greater than they were under the rather mild conditions which prevailed last winter in the New England area.

Total production of Pennsylvania anthracite in 1951 through November 17 amounted to 36,050,000 tons, a reduction of 8.5 percent as compared with 39,410,000 tons in the same period of 1950. During the summer months of 1951 the anthracite mines worked only 3 or 4 days a week, largely because of slowness by consumers in placing their orders for the coming winter. Over the past several weeks, however, demand has picked up considerably and the mines have been working generally on a 5-day basis. Production operations can be further increased if and as required by market demands. Producers' stocks of anthracite on October 1, 1951, were 1,114,626 tons, or 10.6 percent greater than such stocks on the same date in 1950.

However, reflecting the sluggish summer buying of consumers, stocks in the hands of retail dealers also have lagged behind last year. Total retail dealer stocks of anthracite in the United States (principally in the North Atlantic seaboard area) were 2,792,000 tons on September 30, 1951, or 13.2 percent below the amount on the same date last year. Most of the anthracite consumed in New England is brought in by rail. The total number of all-rail cars of anthracite moved into New England this year through November 17 was 53,306, or almost 20 percent fewer than in the corresponding period of 1950. The comparatively small movements to New England by tidewater have declined even more, from 50,768 tons to 31,321 tons, or by 38 percent as compared with last year.

These comparative figures indicate that inventories of anthracite in New England are not in strong condition. In the event of bad weather this winter, and considering also the tight rail-car situation as previously noted, difficulties may be encountered unless anthracite stocks at consuming points are strengthened without delay. To be prepared for a cold winter, dealers and consumers should protect themselves more adequately than they have against local shortages and deficiencies of certain sizes by laying in their winter requirements as soon as possible.

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